

## PHOTOCATALYTIC FIBER AND ITS PRODUCTION

**Patent number:** JP9000947  
**Publication date:** 1997-01-07  
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**Classification:**  
- international: **B01J21/06; B01J35/02; B01J35/06; D06M11/46; B01J21/00; B01J35/00; D06M11/00; (IPC1-7): B01J35/06; B01J21/06; B01J35/02; D06M11/46**  
- european:  
**Application number:** JP19950176934 19950621  
**Priority number(s):** JP19950176934 19950621

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### Abstract of JP9000947

**PURPOSE:** To allow a photocatalytic fiber to exhibit photocatalytic action even in a place hardly exposed to light by carrying a photocatalyst on an optical fiber having a light leaking part and to enhance the efficiency of utilization of the photocatalyst.  
**CONSTITUTION:** An aq. dispersion of a photocatalyst is applied to the surface of an optical fiber and the photocatalyst is fixed. That is, photocatalyst powder is dispersed in a resin soln. prepd. by dissolving epoxy resin, acrylic resin or styrene resin in an org. solvent, a soln. of a silane coupling agent or water glass, the resultant liq. is applied to the surface of an optical fiber and the powder is fixed by polymn. curing or by evaporating the liq. by heating. The polymn. curing is carried out by a heating reaction or irradiation with active energy such as UV rays. A commercially available titanium dioxide or zirconium oxide sol may be used as the aq. dispersion. The objective photocatalytic fiber may be produced by applying a partial hydrolyzate of an organometallic compd. to the surface of an optical fiber and fixing it by condensation reaction.

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